SURETE

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Which CD-R/RW devices can be connected to SURETE?

Below you will find a list of CD-R/RW drives tested by Ingrasys. This list will be updated on a regular basis.

Brand	Model	Speed
AOpen	CRW4850	48X,12X,50X
AOpen	CRW3248	32X,12X,48X
ASUS	CRW-5224A/BLACK	52x,24x,52x
HP	CD-RW 9500i	12X,8X,32X
LITE-ON	LTR-52246S	52X,24X,52X
LITE-ON	LTR-48246S	48X,24X,48X
LITE-ON	LTR-32123S	32X,12X,40X
PLEXTOR	PX-W4824TA/Black	48X,24X,48X
PLEXTOR	PX-W1210TA	12X,10X,32X
PLEXTOR	COMBO PX-320A/Black	20X,10X,40X
RICOH	MP7400A	40X,10X,40X
RICOH	MP7320A	32X,10X,40X
RICOH	MP7163A	16X,10X,32X
RICOH	MP7200A	20X,10X,40X
SONY	CRX215A1	48X,24X,48X

Which hard disk drives can be connected to SURETE? Is there any capacity limitation on hard disk drives?

Hard disk drives with an EIDE interface and compliant with the ATA standards (ATA-2, ATA-3, ATA-4, ATA-5, bus speed UDMA-33, UDMA-66, UDMA-100, UDMA-133) can be connected to SURETE; and there is no capacity limitation on hard disk drives. Below you will find a list of hard disk drives tested by Ingrasys. This list will be updated on a regular basis.

Brand	Model/Firmware_version	Speed	Capacity
ExcelStor	J240	ATA-100	40G
HITACHI	HDS722525VLAT80	ATA-100	250G
IBM	IC35L120AVVA07-0	ATA-100	123.5G
IBM	DTLA-307075	ATA-100	75G
IBM	IC35L060A	ATA-100	61.5G

IBM	DTLA-307060	ATA-100	61.4G
IBM	DTLA-307045	ATA-100	46.1G
Maxtor	D540X-4G120J6	ATA-133	120G
Maxtor	DiamondMax 16-4A250JO	ATA-133	250G
Maxtor	98196H8	ATA-100	81.9G
Maxtor	D740X-6L	ATA-100	40G
Maxtor	MaXLine II-5A300J0	ATA-133	300G
Maxtor	D540X-4G160J8	ATA-133	160G
Quantum	MP-60000AS	ATA-100	60G
Western Digital	WDC 400BB	ATA-100	40G
Western Digital	WD1200JB-00CRA1	ATA-100	120G
Western Digital	WD1200B-00CAA1	ATA-100	120G
Western Digital	WD1000BB-32CHE0	ATA-100	100G
Western Digital	WD1800JB-00DUA0	ATA-100	180G
Western Digital	WD2000JB-00DUA0	ATA-100	200G
Western Digital	WD2500JB-00EVA0	ATA-100	250G
Western Digital	WDC 800BB	ATA-100	80G

- **Which PCI interface network adapters can be used in SURETE?**

Below you will find a list of network adapters:

Brand	Model	Chipset	Port_Speed	Media_Type
Intel	PRO/1000 MT Desktop	82541GI	10/100/1000	Copper
Intel	PRO/1000 MF Server	82545EM	1000 only	SX Fiber Optic/LC or LX Fiber Optic/LC
Intel	PRO/100 S Desktop	82550GY	10/100	Copper
Intel	PRO/1000 F Server	TL82543GC	1000 only	SX Fiber optic/SC
Intel	PRO/1000 XT Serevr	FW82544E	10/100/1000	Copper
Intel	PRO/1000 MT Desktop	RC82540EM	10/100/1000	Copper
Intel	PRO/1000 T Desktop	RC82544GC	10/100/1000	Copper

- **Which DVD-ROM drives can be connected to SURETE?**

Below you will find a list of DVD-ROM drives tested by Ingrasys. This list will be updated on a regular basis.

Brand	Model	Speed
LG	GDR-8161B	16x
LITE-ON	LTD-166S	16x
PLEXTOR	COMBO PX-320A/Black	12x
SONY	DDU1621	16x

- **Which IDE interface Tape drives can be connected to SURETE?**

Brand	Type	Model	Capacity	Hardware_Compress
Ecrix	AME	VXA-1i IDE/ATAPI	33/66 GB	Yes
OnStream	ADR2	ADR2.60ide	30/60 GB	No
SONY	AIT-2	SDX-520C	50/130 GB	Yes
SONY	AIT-1	SDX-420C	35/90 GB	Yes

- **Which DVD-R/RW drives can be connected to SURETE?**

Brand	Model	Speed
ENlight	EN-DD0401A	2x,4x,10x,24x,12x,40x
NEC	ND-2500A	2x,8x,16x,32x,12x,40x
NEC	ND-1300A	2x,4x,10x,16x,12x,40x
Pioneer	DVR-A07/Black	4x,8x,24x,24x,16x,40x
Pioneer	DVR-A06	2x,4x,10x,16x,12x,32x
Pioneer	DVR-A05	2x,4x,8x,16x,12x,32x
Pioneer	DVR-A04	1x,2x,4x,8x,4x,24x
PLEXTOR	PX-708A/Black	2x,4x,24x,40x,12x,40x
SONY	DRU-530A	2x,4x,24x,40x,12x,40x
SONY	DRU-510A	2x,4x,16x,24x12x,32x
SONY	DRU-500A	2x,4x,10x,24x,8x,32x

- **Which DVD+R/RW drives can be connected to SURETE?**

Brand	Model	Speed
ENlight	EN-DD0401A	2.4x,4x,10x,24x,12x,40x
HP	dvd writer dvd300i	2.4x,4x,10x,16x,8x,40x
NEC	ND-2500A	4x,8x,16x,32x,12x,40x
NEC	ND-1300A	2.4x,4x,10x,16x,12x,40x
Pioneer	DVR-A07/Black	4x,8x,24x,24x,16x,40x
Pioneer	DVR-A06	2.4x,4x,10x,16x,12x,32x
PLEXTOR	PX-708A/Black	4x,8x,24x,40x,12x,40x
RICOH	MP5240A	4x,4x,10x,24x,8x,40x
RICOH	MP5125A	2.4x,2.4x,10x,12x,8x,32x
RICOH	MP5120A	2.4x,10x,12x,8x,32x
SONY	DRU-530A	4x,8x,24x,40x,12x,40x
SONY	DRU-510A	4x,4x,16x,24x,12x,32x
SONY	DRU-500A	2.4x,2.4x,10x,24x,8x,32x

- **Does SURETE support SCSI adapters and SCSI TBUs?**

Yes, SURETE 84xx/8200/44xx/4200 support SCSI adapters and SCSI TBUs, you can refer to our compatible list to purchase the devices.

- **How to set SCSI ID of SCSI TBUs for connect to SURETE 84xx/8200/44xx/4200?**

You can set ID to "0" or "1" for connect SCSI TBUs to SURETE 84xx/8200/44xx/4200, SURETE only supports two SCSI TBUs, if you set ID of SCSI TBUs to another ID number except for "0" and "1", SURETE will cannot recognize the SCSI TBUs.

- **Which SCSI adapters can be used in SURETE 84xx/8200/44xx/4200?**

Please notice only SURETE 84xx/8200/44xx/4200 can connect SCSI adapters to PCI slot of SURETE.

Brand	Model
Adaptec	29160LP
LSI LOGIC	LSI20160

- **Which SCSI TBUs can be used in SURETE 84xx/8200/44xx/4200?**

Please note only SURETE 84xx/8200/44xx/4200 support SCSI TBUs for data backup.

Brand	Type	Model	Capacity	Hardware_Compress
HP	LTO	SureStore Ultrium 230	100/200 GB	Yes
HP	DAT	SureStore DAT 40	20/40 GB	Yes
SONY	AIT	SDX-700C	100/260 GB	Yes
TANDBERG	Super DLT	SDLT 220	110/220 GB	Yes

- **Can I connect SCSI hard disk drives to SURETE?**

No, SURETE only supports IDE intreface of hard disk drives.

- **Which Tape Library (Auto Loader) can be used in SURETE?**

Brand	Type	Model
Exabyte	AME	EZ17
SONY	AIT	LIB-162

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- What will happen if there is a power loss while writing data to SURETE?
- What will happen to the existing RAID groups at a restart that had a power loss in the rebuilding state?

- **What is RAID?**

RAID stands for Redundant Array of Independent Disks, a subsystem that increases performance and/or provides fault tolerance. For instance, when the hard disk's data is corrupted or destroyed, RAID can provide a safeguard function to protect the data's accuracy.

- **What RAID policy does SURETE support?**

SURETE supports three RAID policies:

RAID 0: Stripe/Span. (2 ~ 8 hard disk drives). It interleaves data across multiple disks for better performance. Safeguard function is not provided in RAID 0.
RAID 1: Mirror. (multiplication of 2 hard disk drives). It provides 100% duplication of data into paired hard disks. This offers the highest reliability, but doubles the storage cost.
RAID 5: Striped with Rotating Parity (3 ~ 8 hard disk drives). Data is striped across three or more drives. Parity bits are used for fault tolerance.

- **Can I use RAID 1 and RAID 5 in SURETE concurrently?**

Yes. SURETE provides the independent RAID group, which means you can group several different RAID group at the same time in SURETE.

- **Generally RAID systems use either the hardware RAID controller or the software-only RAID system. Which one is used by SURETE?**

SURETE utilizes an innovative method of RAID management. It is a hardware and software integrated solution, using a patent-pending technology for RAID management and access. This solution can provide more storage capacity while maintaining the RAID performance and improving RAID functionalities.

- **While creating RAID, must the hard disk drives installed in SURETE be of the same brand and size?**

Theoretically, the answer is negative. But for the performance concerns, the same brand drives will have the similar characteristics; it will help to maintain the overall performance especially on exchanging data.
To have an optimized capacity of a RAID group, the similar size (or even same size) hard disk drives will be recommended. For example, if you use one 10GB hard drive and a 60GB hard drive to create RAID 1, only 10GB will be the available storage space instead of 60GB. If you use two 60GB hard drives to create RAID 1 group, the available storage space will be 60GB. Performance wise, this is also a fact, the similar capacity hard drives will mostly have the identical RPM speed. If the RPM of hard drives is different with each other, they will interfere each other and affect the overall performance a lot.

- **Should the hard disk drives be connected onto the same IDE channel while creating a RAID device?**

No, you can group any hard disk drives (No Init) that are available on the IDE channels of the SURETE. In order to gain better performance for RAID device, we will suggest to group hard disk drives located in the different IDE channels. For example, you have 6 hard disk drives connected to the SURETE and you want to create two RAID level 5 devices. RAID group A should consist of HD1, HD3, HD5 (all drives connected as "master" devices), and RAID group B should consist of HD2, HD4, HD6 (all drives connected as "slave" devices).

- **Can a "3-drive RAID-5" be dynamically be expanded to "4-drive RAID-5" without losing the existing data?**

Yes. SURETE provides a big and powerful function ¡§Hot Expansion¡¨ now; you can set one hard drive in ¡§Expand¡¨ web page for expand capacity of RAID group. It means that the data stored in the old RAID device will not be lost when you want to increase capacity of storage at no downtime. Dynamically changing the configuration of the RAID device is practicable in SURETE.

- **Will the data stored in the non-RAID drive be lost when I include this drive into a new created RAID device?**

Before a non-RAID drive being included into a RAID device, it has to be deleted as "No Init" state. It means that it will be formatted before being selected into this RAID device; the data stored in this drive will be lost.

- **When trying to build a RAID group in SURETE, why I do not see any available hard disk drive in the "Config RAID" page?**

To avoid the user would accidentally include in-use hard disk drives into a RAID device, only the "No Init" (or so-called "Un-used Disks") hard disk drive(s) will be shown in this page for selection. Before you can create a RAID device, these candidate drives have to be deleted as to the "No Init".

- **How about the performance difference will be observed between non-RAID and RAID device?**

It is difficult to measure precisely because it depends on several factors like "amount of memory installed", "amount of drives being included in the RAID device", ¡Ketc. General speaking, the grades of performance should be classified "RAID level 0" > non-RAID > "RAID level 1" > "RAID level 5". And we believe the performance should not be the major consideration to decide whether you should create a RAID device or not; it should depend on your real-world application. According to our in-house test result, the performance difference among RAID level 0, non-RAID, and RAID level 1 should be within 5 ~ 10%. But for RAID level 5, the performance drop will be around 15 ~ 25% compared with non-RAID device. That is because RAID 5 service will consume more physical memory and CPU power for calculation.

- **Should more memory be installed onto SURETE when RAID groups are used?**

For create RAID group in SURETE, we suggest you install at least 128MB add-on memory into the SURETE for the operation of RAID group.

- **Can I adjust the "strip size" in the RAID 0 or 5 groups of SURETE?**

No, the RAID feature of the SURETE does not provide a parameter to adjust the strip size.

- **Is "Hot Swap" function supported by SURETE?**

Yes, SURETE cooperates with Ingrasys-approved mobile racks to provide the hot-swap and other related function for all hard drives.

- **Is "Hot Spare" function supported by SURETE?**

Yes, you can configure any "Unused Disks" drive as a "Hot-Spare Disks".

- **Can you explain "global Hot Spare" briefly?**

SURETE uses the hot-spare disk(s) to recover a RAID group automatically and immediately when a RAID group is degraded with a bad disk. It ensures data protection and availability. The hot-spare disks in SURETE are global because they are not associated with any specific RAID group. Any RAID group in SURETE being degraded, a hot-spare disk will be consumed immediately to

recover that RAID group.

- **What is the "Hot Expansion" function? On what occasions can it be used?**

The hot-expansion function is used to enlarge the capacity of a RAID group without shutting down the system. With the hot-swappable HDDs and RAID hot-expansion, it is now possible to expand your storage capacity on demand while getting the maximum system uptime.
For example, assume that you only need 480GB of storage capacity. You can connect five 120GB HDDs to SURETE and create a RAID-5 group. A year later, 480GB might not be enough and you will need 240GB more. At this time, you just plug in two 120GB HDDs to SURETE and join them into that RAID-5 group. You will get a RAID group with the capacity of (480GB + 240GB) = 720GB. All these are done while the system is still on-line.

- **What will happen if there is a power loss while writing data to SURETE?**

The data will probably be lost and the file system corrupted because some files may still be kept open and not correctly closed before the system shuts down. If this happens, SURETE will perform a detailed file system checking process at the next reboot to avoid corruption in the file system and to maintain the data integrity of the damaged files.

- **What will happen to the existing RAID groups at a restart that had a power loss in the rebuilding state?**

When RAID group is still in the rebuilding state, once the power is loss or reboot. SURETE will continue previous rebuilding percentage to rebuild RIAD group.

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What is SmartSync? When to use it?

SmartSync is a backup option inside SURETE, and its main use is for Remote Data Synchronization.
It is used when there are SURETE set up on both local and remote areas. We create a synchronous connection of data stream between the matching volumes or folders on the two servers, enabling the synchronization of data on both sides. The benefit is that SmartSync allows the remote backup of large amount of data stored on SURETE servers, ensuring the security of the data.

What are the needed components of SmartSync?

SmartSync consists of at least two SURETE servers. One is on the client side (synchronizing side), while the other is on the server side (synchronized side). Of course, a connection between the two server ports is necessary.

Is the server on the synchronized side limited to the use of TCP/IP connection?

Yes. TCP/IP is known for its ability to pass through routers and to remotely connect through Internet, as well as its broad adoption and convenience. Therefore, we use TCP/IP as the communication protocol to search for the synchronized server.

How many tasks can SmartSync perform at the same time?

Each SURETE can perform 8 tasks simultaneously, including immediate and scheduled ones.
However, we do not recommend running too many tasks at the same time, since running more tasks means more system resources are required as well as the network bandwidth. This will greatly affect the performance of SURETE and the network.

Why data stream has to be compressed when transferring data?

Normally, when doing the data transfer, the network bandwidth is the bottleneck, not the processing power of the system itself. By compressing the data stream, the loading on the network bandwidth and the devices is reduced. Therefore compressing data stream at data transferring will increase the efficiency of SmartSync, especially for the performance of Wide Area Network (WAN).

What needs to be considered when setting up Bandwidth Control? Why?

If we do not control the bandwidth for the data stream when SmartSync is performing its tasks, the synchronous connection may occupy a lion share of the whole network bandwidth, making the server or network unable to provide other services to the clients at a good performance, especially those at the remote network area.
Although most enterprises are now using broadband connections, they normally provide various services using these connections. To prevent SmartSync from occupying too much of the network bandwidth, it is recommended to set up Bandwidth Control during execution of the tasks. Some parameters to be considered are: 1. the total bandwidth and the distribution of bandwidth that the enterprise has in its network environment; 2. the frequency of accesses by the clients and the number of clients served by

SURETE.

What does Quick Synchronization mean?

When SmartSync is performing the second task, we can choose the Quick Synchronization option.
By selecting this option during synchronization, SmartSync will first check the file lists on both the source server and the destination server. Then, it checks the modify time and file size of those files. If the results of both items are identical, the system will simply bypass the synchronization of those sets of files and step to the next sets files. Thus it reduces the loading on the network bandwidth and the processing time.

What solutions for remote backup does SURETE currently provide?

SURETE's solution for remote backup is SmartSync.
Just like the other NAS storage systems on the market, current synchronization mode is remote mirroring. That is the client-side server can use SmartSync to make a mirrored image on the server side to achieve remote backup.

Does SmartSync support data synchronization from desktop to SURETE?

SmartSync currently supports data synchronization only from SURETE to other SURETE servers. We may consider implementing data synchronization from Windows platform to SURETE at the second stage.

What is the minimum hardware spec required by SmartSync?

Because SmartSync is a resource-consuming task, SURETE requires at least 256MB add-on RAM.

Sometimes the SmartSync task will be terminated by a reason "memory low", what's the possible cause?

Because SmartSync is a memory-consuming operation, memory utilization rate is critical when launching this task. When SURETE detects the free memory is low, the program will terminate the synchronization task. To avoid this situation, we will suggest checking following configuration or timing before launching SmartSync task.
1. Add-on RAM. 512 MB is suggested while 256 MB is minimum.
2. Set the SmartSync task to perform at non-rush hour to avoid memory conflict with routine network services.
3. Set a proper SmartSync source path. If the SmartSync source includes up to millions files/directories, that will occupy most of the memory capacity when creating check list, it is suggested assigning the source path in multiple sub-directory in different tasks.

What protocol is used for SmartSync? Is it CIFS/SMB, FTP or NFS network protocols?

SmartSync does not use CIFS/SMB, FTP or NFS as its communication protocol. It is based on SSL over TCP/IP. This also means SmartSync has its own security policy and won't reference to SMB, FTP or NFS security setting.

Which part of SURETE will be mirrored to SmartSync Point? Data, Share Setting, ACL setting or User database?

SmartSync feature focuses on "Data" part remote backup. Thus only Data and ACL setting in the Data will be synchronized to remote servers, it does not synchronize User database and Share setting information to the SmartSync point. (Please refer to the FAQ section "Backup". SURETE provides an advanced feature to Backup/Restore system configuration/User Database/Share setting in Backup -> System Profiles page)

If I use firewall or NAT device in my network environment. Which ports have to be opened for SmartSync tasks?

The default port number are 873 and 22, you have to open these two ports for SmartSync tasks.

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- Can I use FTP client software to download/upload data from/to the SURETE?
- Why did I cannot find SURETE in "Network Neighborhood" or "My Network Place"?

- **How can the users access (read/write) data from the SURETE?**

You can manipulate the standard browsing tools coming with the OS such as Microsoft Explorer, File Manager, ...etc. to locate and access data from "shares" of the SURETE. Before you want to access data from the SURETE, please make sure you have permission to do this.

- **Can the user remove the "share" from the SURETE by using a standard OS tool like Microsoft Explorer?**

No, the user cannot remove the whole shares of the SURETE by using a standard OS tool (such as Microsoft Explorer). But the user can still delete files/folders located underneath the share by using Microsoft Explorer if he has the permission to do this. If the share of the SURETE has to be removed, the system administrator has to get into the HTTP administration page to delete it.

- **Can the SURETE behave itself as a stand-alone server without the existence of another file server?**

Yes, when SURETE is working in Microsoft, Macintosh, UNIX and HTTP network environments, the SURETE behaves itself as a stand-alone server.

- **I can open a share in the SURETE, but sometimes I cannot find this share from the Internet Explorer. Why?**

This is because the web browser may have "cache" for this page. You just need to click the "Refresh" button of the web browser and the updated content will be displayed.

- **Which web browser does the SURETE support?**

Actually SURETE can support standard web browsers. Below are the most popular web browsers in the market, which the SURETE supports:

•Microsoft Internet Explorer 4.0 or above.
•Netscape Navigator 4.05 or above.

- **What kind of languages support does SURETE provide?**

SURETE provides 11 languages for localized web pages (including user access and administration), meanwhile, SURETE supports the following code page for file name and administration usage: English and western European, CJK DBCS, Hebrew, Arabic and Unicode.

- **How can I configure the web browser to view the web page of the SURETE in different languages?**

First of all, you have to add the language into the language preference list (IE. "Internet option - Languages - Add") and set it as the first priority in the web browser. And then choose the appropriate encoding method to view correct home page of the SURETE in different languages. Here are the encoding standards supported by the SURETE in different languages:

•Chinese (Taiwan) [zh-tw]
•Chinese (PRC) [zh-cn]

•English (United States) [en-us]
•French (France) [fr]
•German (Germany) [de]
•Italian (Italy) [it]
•Japanese [ja]
•Korean [ko]
•Spanish (Traditional Sort) [es]

- **Can I assign the language other than English to be the names of server, share/volume, and folder/file in the SURETE?**

Yes. SURETE does support multi-lingual for naming. In order for the SURETE to work properly under different language versions of Microsoft operating systems, you have to choose the correct "Language (Code Page)" (Server Settings->General in Admin Home page) to work under the specific language environment. Here is the list of the SURETE supported code pages:

•CP950-Chinese BIG5 for Traditional Chinese
•CP936-Chinese GB for Simplified Chinese
•CP437-DOSLatinUS for English
•CP850-DOSLatin1 for French, German, Italian and Spanish
•CP932-Shift JIS for Japanese
•CP949-Unified Hangul for Korean
•Mac Roman for Macintosh
•CP1255-WinHebrew for Hebrew
•CP1256-WinArabic for Arabia

- **Can I name a file by using two-byte characters?**

Yes. SURETE supports CJK DBCS code page, therefore, the file name contains two-byte characters (including Traditional Chinese, Simplified Chinese, Japanese, and Korean) will be shown and accessed in SURETE.

- **Will the SURETE show me the home pages in different languages when I am using the different language web browsers?**

Yes, a specific language home page of the SURETE will be shown in your different language web browsers. It depends on the language version of web browser installed in your client.

- **Can I use FTP client software to download/upload data from/to the SURETE?**

Yes. SURETE supports FTP protocol.

- **Why did I cannot find SURETE in "Network Neighborhood" or "My Network Place"?**

Within TCP/IP of network environment, if your PC and SURETE configure IP address to different IP segment, you won¡¦t find SURETE appear in "Network Neighborhood".
You can find four kinds of solution for your reference below:
1 Set up all of client PCs and SURETE register to WINS server, you can use "Find Computer" to find SURETE.
2. Create "Lmhosts" file in all of client PCs, you can create a relation between client PCs and SURETE.
3. You can use "DOS Prompt Command" under windows; perform "net use" command to map the shared folder inside SURETE. For example:
net use z: \\< Host IP >\< share >, "z:" means "network disk letter", "Host IP" is SURETE IP address, "share" is a shared folder name inside SURETE.

Back List

- Can I backup and restore data via using commercial backup software?
- Is there any limitation when I try to burn CD in the SURETE?
- Can I perform multiple recording tasks simultaneously if I install two CD-R/RW drives into SURETE?
- How does SURETE handle the repair of the flash system in the event of a crash?

- **Can I backup and restore data via using commercial backup software?**

The data stored in the file volume of the SURETE can be backed up over the network to the backup device (such as a tape drive) of the server on which the backup software (such as Veritas) is running and vice versa. The data in the backup device can also be restored to the file volume of the SURETE over the network.

- **Is there any limitation when I try to burn CD in the SURETE?**

If your SURETE is in the following situations, the recording task might fail:

1.During the recording process, the SURETE is under a heavy loading network traffic.
2.During the recording process, the same IDE channel's CD-ROM drive is performing a CD insert/eject operation.

If the recording tasks continue failed, we strongly recommend you to lower the recording speed or choose better quality CD-R discs.

- **Can I perform multiple recording tasks simultaneously if I install two CD-R/RW drives into SURETE?**

In order to increase the successful rate of burning CD, the SURETE does not support multiple recording tasks simultaneously. It will however collect all the requested tasks and complete them one after another.

- **How does SURETE handle the repair of the flash system in the event of a crash?**

SURETE features with the system configuration backup/restore function to protect the system configuration from system crash.

Back List

- What kind of device interfaces can SURETE support?
- How many storage devices can be connected to SURETE?
- Is there any capacity limitation of hard disk drives connected to SURETE?
- Can I use other than Ingrasys-approved mobile racks instead?
- Does the SURETE support CD-R/RW and DVD+-R/RW devices?
- Does the SURETE support DVD-R/RW or DVD+-R/RW devices?
- How to operate CD-R/RW devices and DVD+-R/RW devices on SURETE?
- The interoperability issue between DVD+R/RW disc and DVD-ROM drive.
- Can I connect CD-R/RW, CD/DVD-ROM and DVD+-R/RW drives to the same IDE channel?
- Can I connect CD/CD-RW/DVD-RW/DVD-ROM and hard disk drives to the same IDE channel?
- Can I connect two hard disk drives to IDE channel 5?
- Why will several GB space of a hard disk drive be lost after being initialized in SURETE?
- Any hard disk capacity limitation in SURETE?
- Why did my Western Digital (WD) EIDE 180GB and 200GB drives are dropped from an RAID group of SURETE after several days or weeks of operation?

- **What kind of device interfaces can SURETE support?**

SURETE supports CD/DVD-ROM, CD-R/RW, DVD+-R/RW and hard disk drives of EIDE interface.

- **How many storage devices can be connected to SURETE?**

There are 4 EIDE UDMA-133 channels and one independent EIDE UDMA-100 channel supported by SURETE. It means you can connect up to 8 EIDE hard drives to the 4 EIDE UDMA-133 channels that support hot swap, GLOBAL hot spare and hot expansion. In addition, you can connect 2 EIDE optical devices or tape drives to the independent EIDE UDMA-100 channel for backup purpose.

- **Is there any capacity limitation of hard disk drives connected to SURETE?**

SURETE have to connect minimum HDD capacity that is over 10GB, the maximum capacity limitation is 2TB. The hard disk drive must be EIDE interface and ATA compliant.

- **Can I use other than Ingrasys-approved mobile racks instead?**

Ingrasys develops the patent in IDE hot-swappable hard drive technology to provide more reliable and convenient in data redundancy. SURETE performs the excellent data redundancy functions through the Ingrasys-approved mobile racks. If other mobile racks than Ingrasys-approved one are used, SURETE still performs well except the data redundancy functions, such as hot-swap, hot-expansion, etc will not be available. Benefits of the full-range data protection can be achieved only by using the Ingrasys-approved mobile racks.

- **Does the SURETE support CD-R/RW and DVD+-R/RW devices?**

Yes. SURETE can burn data on CD-R/RW discs or DVD+-R/RW discs for backup or archiving.

- **Does the SURETE support DVD-R/RW or DVD+-R/RW devices?**

Yes, DVD-+R/RW drive and DVD-R/RW drive can be connected with SURETE. It means DVD+R/RW disc can be burned through DVD+R/RW drive and DVD-R/RW disc can be burned through DVD-R/RW drive. Please refer to the tested drives list to know the model of DVD+R/RW drive or DVD-R/RW drive that are compliant to the SURETE.

- **How to operate CD-R/RW devices and DVD+-R/RW devices on SURETE?**

You can find two functions within Admin Home page of SURETE that are "Writer" and "Loader" for backup or restore data.

- **The interoperability issue between DVD+R/RW disc and DVD-ROM drive.**

DVD+R and DVD+RW disc are new recordable media standard being introduced to the industry recently. So, it can be predicted that some interoperability issues may happen between this new media and old drives. It is also found that many of the DVD-ROM drives cannot recognize the DVD+R or DVD+RW discs, whether it is either burned by SURETE or regular PC. However, it is believed that DVD-ROM drive manufacturers will improve the compatibility between DVD+R/RW media and DVD-ROM drives in the near future.

- **Can I connect CD-R/RW, CD/DVD-ROM and DVD+-R/RW drives to the same IDE channel?**

Yes. You can perform data backup (Writer) via CD-R/RW, DVD+-R/RW and restore (Loader) data via CD/DVD-ROM.

- **Can I connect CD/CD-RW/DVD-RW/DVD-ROM and hard disk drives to the same IDE channel?**

No, you can't. Depends on SURETE designing, you have to connect hard disk drives to IDE channel 1~4, CD-ROM/CD-RW/DVD+-RW/DVD-ROM drives have to connect to IDE channel 5.

- **Can I connect two hard disk drives to IDE channel 5?**

No, you can't. SURETE can connect up to 8 hard disk drives to IDE channel 1~4, but IDE channel 5 is designed for connect CD-ROM/CD/DVD+-RW/DVD-ROM drives; you cannot connect any hard drives.

- **Why will several GB space of a hard disk drive be lost after being initialized in SURETE?**

It is normally caused by the unit transformation problem. SURETE always uses 1024 as the calculation basis; it means 1GB=1024MB, and 1MB=1024KB. The hard disk drive manufacturers would probably use 1000 as the unit transformation basis.

- **Any hard disk capacity limitation in SURETE?**

Minimum disk capacity is 10GB.
Maximum disk capacity is 2000GB.

- **Why did my Western Digital (WD) EIDE 180GB and 200GB drives are dropped from an RAID group of SURETE after several days or weeks of operation?**

The model of WD 180GB/200GB has a "idle saving power" design in hard drive firmware, this advance design sometimes make timing mistake if connect them in RAID system, thus we strongly recommend you to disable the power saving feature of HDD and it will help to make your RAID system more reliable. Hereunder is the FAQ that captured from WD web site for your reference.
"The problem is a result of a feature that reduces idle acoustic noise in desktop drives. This feature can cause a timeout in an IDE RAID environment. To disable the feature, you can run a simple Western Digital utility to turn off a single bit in the drive run-time configuration. Disabling of this feature will NOT impact normal system operations in a RAID environment. No firmware or hardware changes are required."

Back List

- Does the SURETE support "email notification"?
- Does the SURETE support SNMP protocol for send traps to the administrator?
- What is "Web Reminder"?
- How can I send an email event to administrator?
- How can I send Traps to my NMS?

- **Does the SURETE support "email notification"?**

Yes, SURETE can set up one IP address of SMTP server and two e-mail accounts for email notification.

- **Does the SURETE support SNMP protocol for send traps to the administrator?**

Yes, you can manipulate the NMS software (Ex: HP OpenView) to receive relative traps.

- **What is "Web Reminder"?**

When the SURETE occurs some critical events, you will find a message "There are critical events. Please Check Web Reminder page." in Admin Home page. The intention is reminding administrator to check those critical events as most quick.

- **How can I send an email event to administrator?**

You can follow the steps below to set up email event:
1. Go to SURETE Admin Home page and select "Network Settings".
2. Select the sub menu "Email".
3. Enable SMTP Protocol.
4. Fill in correct SMTP server IP address or Fully Qualified Domain Name (FQDN).
(* If you fill in FQDN, please make sure you had set DNS server IP address inside SURETE.)
5. Fill in a legal user account for login SMTP server purpose.
6. Base on your need; fill in one or two Email Address.
7. Click "Apply" then select "Event" menu to configure further settings.
8. Click "Advance" button in "Configuration" sub menu of "Event".
9. Enable "Email Alert".
10. Check "Event List for Notification" to decide which events can be sent to administrator via email.
11. Click "Apply" button to complete settings.

- **How can I send Traps to my NMS?**

You can follow the steps below to configure:
1. Go to SURETE Admin Home page and select "Network Settings".
2. Select the sub menu "SNMP".
3. Enable SNMP Protocol.
4. Fill in your server IP address (with NMS installed) that you want to receive traps then make sure the "Trap" column is set to "YES".
5. Click "Apply" then select "Event" menu to configure further settings.
6. Click "Advance" button in "Configuration" sub menu of "Event".
7. Enable "SNMP Trap".
8. Check "Event List for Notification" to decide which events can be sent to NMS via trap.
9. Click "Apply" button to complete settings.

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- How easy is it to install/initialize the SURETE?
- Can the LCD panel be used to configure the SURETE?
- What are the advantages of having the LCD panel on SURETE?
- What will SURETE look like after set to "Reset configuration to factory default" within shutdown options?
- What are the default values of major settings of SURETE?
- What to do if the administration password of the SURETE is forgotten?
- Can the SURETE operating system be upgraded?
- How to use the "DIP switch" (S1) located on the SURETE Control Board?
- How to use SURETE "Network Recovery Mode"?
- How many capacity of memory is the minimum requirement for SURETE?
- How to differentiate the different IDE flat and round cables delivered with SURETE and MR-423I pack?
- How to set SURETE all configurations back to factory default?
- When I use web browser (ex. Microsoft IE) with proxy enabled to manage SURETE, even to upgrade latest firmware. Why did the web browser show me like "The page cannot be displayed"?

- **How easy is it to install/initialize the SURETE?**

SURETE is specifically designed as a plug & play stand-alone server. It is not necessary for you to install any additional server or any driver/software application in your client PC. The only thing you have to do is "plug in the network cable and power on SURETE". Only a few simple steps have to be taken before you can access data from SURETE server.

1. Go to the web-based Admin Home page.
2. Go to "Volume" page to create volumes even folders.
3. Create a share for network share via "Security" page.
4. Assign appreciate permission to these shared volume or folder.

- **Can the LCD panel be used to configure the SURETE?**

Yes, you can manipulate the LCD panel to make some basic settings for the SURETE such as "IP address", "subnet mask", "default gateway", "time/date" and so on.

- **What are the advantages of having the LCD panel on SURETE?**

In addition to performing the basic settings on the LCD panel, the SURETE will report some of the system status onto the LCD panel such as "CPU temperature", configuration, firmware version, event status ¡Ketc. It is very convenient for the system administrator to realize the major system status without having to go into web-based administration page.

- **What will SURETE look like after set to "Reset configuration to factory default" within shutdown options?**

All of the settings of SURETE will be returned to default value after it has been set to " Reset configuration to factory default ", which are:
•Server settings: notification level, LCD banner, code page, schedule power-on/shutdown, administration password, time zone, ¡Ketc.
•Network settings: IP relative settings, server/workgroup/domain names, security mode, ¡Ketc.

- **What are the default values of major settings of SURETE?**

The default settings relative to the first time installation are:

1. IP address: 192.168.1.1
2. Domain/Workgroup name: WorkGroup
3. Server name: NASxxxxxxxx
"xxxxxxxx" is the last 8-digit of the MAC address which goes along with each SURETE controller. The MAC address can be found at either the back of your controller or the tower.

- **What to do if the administration password of the SURETE is forgotten?**

SURETE provides an option to clear the administration password. Please follow below steps to clear you password:

1. Shutdown and turn off your SURETE.
2. Set the DIPswitch located in the power connector of control board to 1:on, 2:on.
3. Power on the SURETE till you see message ¡§Clear Password¡¨ shown in the LCD panel.

4. Turn off your SURETE and set the Dipswitch back to 1:off, 2:off.
5. Turn on your SURETE again, and you will see the administration password has been restored to factory default.

- **Can the SURETE operating system be upgraded?**

Yes, the latest version of SURETE firmware can be downloaded at our website (http://www.ingrasys.com). The upgrade task is simple. The instruction can be easily found in SURETE administration web page and just follow steps to complete the upgrade procedures.

- **How to use the "DIP switch" (S1) located on the SURETE Control Board?**

There are four modes to which the Dipswitch can be set; you also can set Dipswitch to whether connect with hot swap HDD module (MR423I):

DIP1 and DIP2:
1. Normal Mode: (default setting) DIP1 =Off, DIP2 =Off.
2. Recovery Mode: DIP1 =On, DIP2 =Off.
3. Manufacture Mode: DIP1 =Off, DIP2 =On.
4. Clear Admin Password: DIP1 =On, DIP2 =On.

DIP3:
1. Connect with hot swap HDD module (MR423I) DIP3=Off
2. Connect without hot swap HDD module (MR423I) DIP3=On

Basically, the users can only access their SURETE in the "Normal Mode". The "Recovery" and "Manufacture" modes are only available for diagnostic purposes by the manufacturer; and the normal user will not be able to access SURETE under these two modes. In addition, SURETE will clear admin password to empty when the Dipswitch is set in the "Clear Admin Password". Please remember, you have to change the setting back to "Normal Mode" before SURETE boots at next time.

- **How to use SURETE "Network Recovery Mode"?**

www.cdpro.fr

- **How many capacity of memory is the minimum requirement for SURETE?**

We strongly recommend you to have at least 128MB memory (SDRAM) installed onto SURETE for maintaining the basic functionality; that will also prevent the system resource from being insufficient while you perform some memory-consumed tasks.

- **How to differentiate the different IDE flat and round cables delivered with SURETE and MR-423I pack?**

Blue round cable (part no: 5011.1402)--> connects with the MR-423I (hot swappable rack) --> 2 cables are delivered with all MR-423I racks together with a I²C cable (part no: 5044.16016) "4 wires + the 2 fixed connectors".

Green round cable (part no: 5011.14027)--> connects with the CD/DVD/tape devices (5th IDE channel in the SURETE controller)--> 1 cable delivered with the basic SURETE controller pack.

Yellow flat cable (part no: 5011.14025, 5011.14026)--> HDDs directly connected with the SURETE when they are not used with a MR-423I rack--> 4 flat yellow cables delivered with the basic SURETE controller pack.

Mixing the cables with the applications will cause malfunctioning of the SURETE. Please keep it in mind and be particularly aware of the fact that the SURETE features of hot swap and hot spare need imperatively the MR432I hot swappable rack. No other exists on the market as special electronic circuitry has been added on its backplane by our engineering team to function properly with the SURETE controller.

- **How to set SURETE all configurations back to factory default?**

SURETE provides two methods for setting configuration back to factory default; you can set it through web page or adjust hardware jumper on motherboard.
Web page:
1. Go to Admin Home page.
2. Select Server Settings.
3. Select Shutdown of sub menu.
4. Enable "Reset configuration to factory default".
5. Click "Reboot" button for completed the process.
Hardware jumper:
1. Turn off SURETE.
2. Fine out a Jumper (JP1) on motherboard, which located near the front LCD panel.
3. Set the jumper from short pin 1-2 to short pin 2-3 (like as PC's clear CMOS).
4. Set the jumper back to short 1-2.

5. Turn on SURETE; all configurations were back to factory default.

- **When I use web browser (ex. Microsoft IE) with proxy enabled to manage SURETE, even to upgrade latest firmware. Why did the web browser show me like "The page cannot be displayed"?**

SURETE management interface was designed by web base. Thus, when you want to set or modify some configurations, SURETE have to get the real-time information as its best.

Here is the workaround for your reference:
1. Open the IE browser.
2. Select the Tools->Internet Options->Connections->LAN Settings.
3. Click the "Advanced" button.
4. Within the "Exceptions" item fill in the window with IP address of SURETE.
5. Click "OK" to complete setting.

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- Which network topology is supported by SURETE?
- Can SURETE get the IP address automatically?
- What benefits are available from the dual NIC?
- How many network operating systems are compliant with the SURETE?
- Can Macintosh clients access data directly from the SURETE through network?
- Does SURETE support NetWare environment?
- Can clients of different operating systems access data from SURETE at the same time?
- Is SURETE compliant with Microsoft Distributed File System (DFS)?

- **Which network topology is supported by SURETE?**

Ethernet. SURETE is equipped with network adapter of dual 10BaseT/100BaseTX Fast Ethernet auto-sensing/auto-negotiation. It also supports fail-over. In addition, an optional Ethernet Gigabit/Fiber Gigabit NIC can be added onto SURETE to enhance network performance.

- **Can SURETE get the IP address automatically?**

Yes, SURETE supports the DHCP protocol, which can assign IP address automatically from DHCP server. Therefore, SURETE will be assigned with an IP from DHCP server.

- **What benefits are available from the dual NIC?**

The dual NIC in SURETE can provide load-balance function to relieve network traffic. In addition, the dual NIC also provides the fail-over function to ensure consistent network connectivity.

- **How many network operating systems are compliant with the SURETE?**

Please refer to below list:

Network_Type	Server_Emulation	Protocol	Network_File_Sharing_Protocol
Internet/Intranet	HTTP	TCP/IP	HTTP
Macintosh	Mac OS 8.x/9.x/10.x	AppleTalk,TCP/IP	AFP,CIFS/SMB
Microsoft	Windows	TCP/IP	CIFS/SMB
Unix/NFS	Unix server with NFS daemon installed	TCP/IP	NFS

- **Can Macintosh clients access data directly from the SURETE through network?**

AppleTalk (Apple Share), TCP/IP (Apple Share IP), and Hierarchical File System (HFS) are all supported by the SURETE. Macintosh clients can use the "Network Browser" and the "Chooser" to locate, mount or access (read/write) data directly from the shares/volumes managed by the SURETE.

- **Can clients of different operating systems access data from SURETE at the same time?**

Yes, SURETE support multiple communications and file sharing protocols. It means that the data stored in SURETE can be accessed through multiple OS platforms at the same time.

- **Is SURETE compliant with Microsoft Distributed File System (DFS)?**

Yes, share volume of the SURETE can be redirected to the DFS root of Windows NT/2000 with DFS service installed.

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- Does SURETE support UPS systems?
- What type of switching power supply is recommended to connect with SURETE?
- Is there any special attention needed to be paid in spec while installing ATX power supply?
- What power management features does the SURETE support?
- Which model of APC Smart series UPS can be connected to SURETE?
- How soon do we need to replace the broken cooling fan before it may cause system overheated?

- **Does SURETE support UPS systems?**

Yes, SURETE can integrate with UPS power management via smart signaling as well. SURETE can connect APC Smart serial UPS in current state.
For detail model inquiry, please visit APC web site Smart-UPS section.

- **What type of switching power supply is recommended to connect with SURETE?**

We strongly recommend you to install ATX switching power supply with the SURETE because the features of controlling ATX power supply have been included in the hardware and firmware of the SURETE.

- **Is there any special attention needed to be paid in spec while installing ATX power supply?**

It is strongly recommended to use ATX power supply unit with more than 350 watt for SURETE. Especially, the peak current of 12 Voltage needs to be over 22 A. For instance, the spin-up current of HDD will be 2800 mA when 8 HDDs are connected with SURETE. The peak current can reach over 22.4 A (2800 mA X 8). To avoid the situation that HDD can't be mounted, it is suggested to use power supply of recommended spec.

- **What power management features does the SURETE support?**

The SURETE has supported the following outstanding features on power management if an ATX power supply is engaged. For example, "UPS control to shutdown", "safe shutdown", "schedule shutdown", and "schedule power ON".

- **Which model of APC Smart series UPS can be connected to SURETE?**

You can go to www.apc.com under product / UPS. You will see Smart-UPS and Smart-UPS XL series. This is what SURETE support because they use the same protocol. The model changes as time goes. Customers can also go this site for exact model they need.

- **How soon do we need to replace the broken cooling fan before it may cause system overheated?**

We have the redundant hot-swap cooling fans installed in the back of system (in model SURETE 8100T and 8100R). Actually only one cooling fan is good enough to handle the heat issue of system. System still can normally function when one of cooling fans is malfunctioning and the other is functioning. So you will have enough time to do hot-swap with the broken one. But system needs to be safely shutdown as soon as you can if both cooling fans are dead.

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- Does SURETE support "file level" security control?
- Does SURETE support Active Directory Service?
- How many nodes of ACL can be applicable in the SURETE?
- How many user accounts can be stored in user database of the SURETE?
- How can I integrate SURETE with Windows NT (PDC) or 2000 (ADS) domain security?
- Can I assign NT local group to the permission list of the share volume?
- Can I use anonymous to logon the SURETE via FTP?
- How does the SURETE perform security control under FTP?
- How does the SURETE rebuild the file system if the power is fail?
- Can SURETE integrate user accounts that stored in "Trust Domain"?
- Why did I cannot add user account to SURETE user database through mouse right-click (Windows native tools)?

- **Does SURETE support "file level" security control?**

SURETE can set security permission via ACL (Access Control List) and applicable to shared folders and files.

- **Does SURETE support Active Directory Service?**

SURETE can integrate ADS environment security policy.
1. Pick up the AD users/groups from the root or branches of AD tree for permission assignment to SURETE's resource.
2. Perform username/password checking with root or branches of AD user database while the AD users are trying to access SURETE's resource.

Regarding to configure steps, please refer to the FAQ title: How can I integrate SURETE with Windows NT (PDC) or 2000 (ADS) domain security?

- **How many nodes of ACL can be applicable in the SURETE?**

SURETE provides 8,192 nodes for ACL setting access control of client.

- **How many user accounts can be stored in user database of the SURETE?**

Up to 8,192 accounts information can be stored in the SURETE, which include local accounts and domain accounts.

- **How can I integrate SURETE with Windows NT (PDC) or 2000 (ADS) domain security?**

You can go through the steps as recommended below to integrate the SURETE with Microsoft Windows domain security:

1. Go to "Windows" option in "Network" of the SURETE Admin Home page.
2. Change to ¡§Domain Mode¡¨ and assign a Domain Name.
3. Apply the settings and reboot the SURETE.
4. Go to "Account" option in "Security" of the SURETE Admin Home page then select "Domain Account".
5. Click "Modify" button and assign an NT domain account to retrieve user/group information from NT domain.
6. Assign appropriate "Authorized" users/groups accounts then click "Apply" button.

When you complete above steps, the authorized accounts will be appeared in "Share Permission" list of each shared volume/folder, you can assign member of "Unselected" list and set permission (No Access, Read only or Read/Write) to the "Privileged" list for security control purpose.

- **Can I assign NT local group to the permission list of the share volume?**

No, only the NT global group can be retrieved from NT domain and assigned to the authorized list of the domain account.

- **Can I use anonymous to logon the SURETE via FTP?**

Yes. SURETE allow you to logon using anonymous. This function can be disabled in Admin Home page.

- **How does the SURETE perform security control under FTP?**

•Access control can be set in "Allow file download only" or "Allow file upload and download"
•Security policy can be set in "Local account authentication" or "Local and domain account authentication"
•You can set "ACL" nodes to secure any folder or file under the tree of "Home Directory"
•You can set "User limit" for control connected amount of user
•You can appoint the "Home Directory" as logon root directory

- **How does the SURETE rebuild the file system if the power is fail?**

SURETE uses the journaling file system that is capable of fast rebuild for file system from system failure.

- **Can SURETE integrate user accounts that stored in "Trust Domain"?**

Yes, you can find a Pull-Down menu in "Domain Account" settings page, you can select any trust domain for integrate those user accounts.

- **Why did I cannot add user account to SURETE user database through mouse right-click (Windows native tools)?**

Only the accounts that were Admins group member can add user account to SURETE user database through mouse right-click. If the login account was not belonging to Admins group, although the login account had full control (FC) permission, he still only can see and modify permission, but cannot add any user account to SURETE user database.

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- What is SURETE?
- What benefits can I get from SURETE?
- What is the form-factor of SURETE?
- What are the differences between SURETE and other NAS products?
- What kind of OS is used in SURETE?
- What are the differences between SURETE OS and Microsoft SAK?
- Is the OS of SURETE stored in the hard disk drive?
- Is there any storage management function provided for SURETE?
- What about user license of SURETE?
- How difficult is it to install a SURETE?
- Can I buy the SURETE as a freestanding product?

- **What is SURETE?**

SURETE is the over-TB class NAS product that features the massive storage capacity, full-range of data protection and superior system availability. SURETE provides the cost-effective, high reliability and high performance network storage system for the fast growing network storage requirement.

- **What benefits can I get from SURETE?**

SURETE is a NAS product. It's designed with massive storage capacity and high performance network speed. Especially in data security control, you can find our advantage as follows:

•New designed H/W platform with a powerful CPU (intel celeron 1.2 GHz CPU).
•Support up to 512MB SDRAM.
•Four EIDE UDMA-133 channels are supported by hot swap (Optional), global hot spare and hot expansion (optional).
•Storage capacity in RAID 5 can be expanded without downtime.
•One independent EIDE UDMA-100 channel can be connected to CD/DVD-ROM, CD-R/RW, DVD+R/RW, DVD-R/RW or tape drives for data backup purpose.
•Built-in dual NIC support 10/100 Base T and provide fail-over, load-balancing and trunk policy.
•One Gigabit NIC (optional).
•Huge storage capacity over TB.
•An ease of use LCD panel with 3 buttons for status monitoring and configuration.
•Support SNMP protocol and can send traps for notify event.
•Support SMPT protocol and can send e-mail for notify event.
•Support ACL (Access Control List).
•SURETE can be seamlessly integrated into heterogeneous networking security.
•Set disk quota for capacity control.
•Power management support integrated with UPS system via smart signaling.
•Power management: Redundant Power Supply (Optional), safe shutdown and scheduled power on/off.
•Data backup and archive functions are supported with the local tape drive, CD/DVD writer or remote storage server SURETE or FISC CDH.

- **What is the form-factor of SURETE?**

The SURETE controller is in the traditional 5.25" form factor, which can be easily plugged in a half-height bay of a regular tower case.

- **What are the differences between SURETE and other NAS products?**

With the expertise in networking storage for years, Ingrasys develops SURETE with its own unique advantages. SURETE is the out-standing product that provides storage capacity over TB in the same NAS chassis. In addition, the primary design concept of SURETE emphasizes the importance of data protection and system availability. Therefore, users can enjoy the benefits from this state-of-art NAS product.

- **What kind of OS is used in SURETE?**

SURETE is equipped with the Linux-based OS that is optimized for networking storage. Ingrasys develops the OS to be seamlessly integrated with its own SlimServer™ technology.

- **What are the differences between SURETE OS and Microsoft SAK?**

The OS of SURETE is the Linux-based OS that is optimized for networking storage. SAK (Server Appliance Kit) is the Windows-based OS that is derived from Windows NT/2000/XP for server appliance product development. Generally, OS of Windows family, such as SAK, can be used as an easy application for NAS due to its built-in support of various protocols and drivers. Linux OS, however, can accomplish the same task as the SAK. Generally speaking, there are many factors that can be looked into in purchasing a NAS to fulfill your need. Factors include cost, hardware and software reliability, manageability, etc. Linux OS or SAK can be treated as one of those factors on your decisions of purchasing a NAS server.

From some points of view, there are some facts you can consider:
•Linux systems are relatively immune from attacks from outsiders.
•Attacked by computer viruses are overwhelmingly more common on Windows family OS than any other systems, such as Linux.

- **Is the OS of SURETE stored in the hard disk drive?**

No, OS of SURETE is not stored in hard disk drive. Instead, OS and system configuration information of SURETE are stored in the DOM (disk on module) - a flash memory. DOM is more reliable and more secure than hard disk drive so you need not to worry about system crash at hard disk failure.

- **Is there any storage management function provided for SURETE?**

RAID management, disk quota and scan disk are management functions provided for SURETE.

- **What about user license of SURETE?**

Unlike other OS, there is no user license fee based on the user number. What you pay includes the hardware and OS of SURETE that can be used in any kind of networking environment.

- **How difficult is it to install a SURETE?**

It only takes up to 15 minutes to install SURETE in the existing or start-up networking environments without any network downtime.

- **Can I buy the SURETE as a freestanding product?**

SURETE is primarily designed as a controller-based and bare bone product. It is available for integrators to build their own NAS products with variety of configurations, disk capacities, form factors (tower or rack mount) and other productive peripherals to fit customers' needs.

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- What is NAS?
- I've heard about another term called SAN. What is the difference between NAS and SAN?
- Will NAS affect network performance?
- What're the differences between NAS and general-purpose NT or UNIX file server?

- **What is NAS?**

NAS is a term used to refer to storage elements that connect to a network and provide file access services to computer systems. A NAS storage element consists of an engine, which implements the file services, and one or more devices on which data is stored. NAS may be attached to any type of network.

- **I've heard about another term called SAN. What is the difference between NAS and SAN?**

Compared to NAS, SAN is a network architecture whose primary purpose is the transfer data between computer systems and storage elements, and among storage elements. Here're some brief comparisons for your reference:

NAS	SAN
Cost is lower	Cost is higher
Data typically is accessed by clients	Data typically is accessed by servers
File system resides in NAS	File system resides in server
For small business and workgroup	For large enterprise
Providing file-based data accessing	Providing block-based data transfer
Using standard file sharing protocol	Using encapsulated SCSI protocol

- **Will NAS affect network performance?**

While NAS is implemented in the networking environment, it will balance the network traffic and relieve the network congestion.

- **What're the differences between NAS and general-purpose NT or UNIX file server?**

Please refer to below table:

NAS	File_Server
Dedicate on File serving,disk I/O,network traffic,user authentication and security tasks	For general-purpose uses
Easy remote,web-based management interface	Local software-based management
No client licensing cost	User access limitation due to client licenses
No down time at Network storage expansion	Server needs to be shutdown and file serving to be stopped at Storage expansion
Optimized and compact hardware design	Oversized hardware design with complex architecture to fit a variety of applications
OS design is optimized for file service	OS design is for general purpose use
Thin and compact OS	Fat and complex OS
True cross-platform file sharing	OS-dependent file sharing

Back List

- What is meant by "Volume" in the SURETE?
- What is "JBOD"?
- What is meant by "Share" in the SURETE?
- Does the SURETE supports folder level sharing?
- How many shares can be managed by the SURETE and exposed to the network?

- **What is meant by "Volume" in the SURETE?**

"Volume" is the basic storage unit for the system administrator to manage data stored in the SURETE. The types of "Volumes" hosted by the SURETE include JBOD and RAID group.

- **What is "JBOD"?**

JBOD ("just a bunch of disks", or sometimes "just a bunch of drives") used to refer to a computer's hard disks that haven't been configured according to the RAID. It means SURETE can configure each hard ¡§disk drive to JBOD and create it to a volume, after that SURETE will have 8 volumes can be used.

- **What is meant by "Share" in the SURETE?**

According to the network file sharing protocol, "share" is the minimum network resource unit exposed onto the network. You can share one volume of SURETE directly; otherwise when you already create some folders in volume of SURETE, you also can select some folders then share them onto the network.

- **Does the SURETE supports folder level sharing?**

Yes. In addition to supports share a volume onto the network, SURETE also supports share a folder onto the network.

- **How many shares can be managed by the SURETE and exposed to the network?**

Up to 255 shares can be managed by the SURETE and exposed to the network.